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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/671,478	09/27/2000	KOUICHIROU WAKABAYASHI	107454	7122

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OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER	
PSITOS, ARISTOTELIS M	
ART UNIT	**PAPER NUMBER**
2653	

DATE MAILED: 04/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/671,478	WAKABAYASHI ET AL.	
	Examiner	Art Unit	
	Aristotelis M Psitos	2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 February 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Applicants' response of 2/22/02 has been considered with the following results.

Specification

The amendment to the title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The examiner strongly recommends a title in idiomatic English that conveys the mo environment & plural reproducing abilities.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations of claim 8, the second actuator must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. The examiner cannot readily ascertain where this second actuator is (separate from the first actuator).

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 6 – 9 and 11 – 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Oshima.

Oshima discloses a mo system wherein both magnetic and optical systems are involved in positioning the appropriate transducers to the track. Applicants' attention is drawn to the following figures and the accompanying disclosure for example:

a) Figure 9, & col. 21 lines 55 plus. Note also the disclosure re TOC fields/ areas.

b) Figure 19 and the magnetic recording area/region.

c) Figures 22 & 23 as well as col. 29 lines 5 plus

d) Col. 20 lines 40 plus for the vertical recording, which the examiner interprets as the perpendicular recording limitation claimed.

e) Figure 83 and col. 45 lines 46 plus for the magnetic servo track appropriately located to perform the corresponding tracking control ability.

f) The twelfth embodiment – col. 50 line 65 to col. 51 line 20 for having the mag. Recording layer opposite the optical recording layer – i.e., on both sides of the record medium.

In short, the examiner considers the above claimed limitations to be found/met by the Oshima reference. The limitations drawn to the method – claims 16 – 20 are considered met when the above system to Oshima operates.

Response to Arguments

2. Applicant's arguments filed 2/22/02 have been fully considered but they are not persuasive. Applicants' arguments with respect to independent claims 6 and 16 are not persuasive for the following reasons. As noted in the document with respect to the disclosure focusing on figure 9 starting in col. 21, it is noted that one side of the record medium is a read-only memory, while the other side of the medium is a random access memory. Furthermore this is a magneto optic system. Hence, the optical head of claim 6 is inherently present, as it is the magnetic reading head. Otherwise no information could be read. Additionally, there must be a magnetic recording head otherwise one could not record. Finally, the positioning devices/means/elements for positioning the appropriate heads is found in the discussion of the reading operation of the system. Applicants focus on the magnetic leakage fields detected by the reproducing head. The examiner considers that the reproducing head (necessary for reading the information from either the ROM side/surface, or the RAM side/surface) appropriately detects the magnetic leakage fields since this is a magneto optic system. If applicants are attributing such magnetic leakage fields to some yet claimed ability/limitation examiner strongly recommends inserting such limitation into the claims, that is the examiner considers such detection to be inherently present from the document and as a direct result of the limitations found/positively recited in the claims.

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 1 above, and further in view of JP 2000 – 182291 or the admitted prior art.

The ability of having a MR or GMR head as the magnetic head in the above claimed system is taught by the cited JP document. Alternatively, both MR and GMR heads are known in this environment.

It would have been obvious to one of ordinary skill in the art to modify the system of Oshima with the teaching from either the cited JP document or the admitted prior art (see MPEP 2144.03), motivation is to take advantage of the features of either MR or GMR heads, noticeable size and weight considerations.

4. Claims 1-6 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over over Oshima further considered with either the acknowledged prior art to Saga et al (article), or the JP document 2-218016 and all considered with servo-sectoring abilities well known.

The Oshima document is relied upon for the reasons stated above and in the previous office action. Furthermore, as noted above Oshima with respect to figure 9, a dual sided mo disc is presented with a ROM and RAM dedicated sides.

As now presented, the claims require the ability of reproducing from the magnetic layer by detection of a magnetic field. This ability is inherently present in the primary reference or alternatively taught by either of the secondary references. That is information is reproduced by the magnetic field. Although the primary reference depicts optical tracking capability, this does not detract from the ability of reading magnetic information from the ROM area. This information is used for positioning and hence the examiner considers it as servo information.

Further interpreting the independent claimed, the examiner considers the ability of placing the marks in a layer, wherein the servo pattern is found in a positioning region, to be merely descriptive of the well-known servo sectoring abilities known in this environment. Applicants' attention is drawn to either the Yamamoto et al or Belser et al (6218021B1) documents or the acknowledged prior art documents for depicting such.

Hence, the examiner considers the separate servo region to be either inherent in the primary reference, or obvious from the secondary documents cited above.

It would have been obvious to modify the reference of Oshima with the above teaching from the secondary references, motivation is to increase the data density by placing the servo information in prix defined/or formatted servo sectors for the inherent servo in function. The ability of having dedicated servo sectors is well established in this environment for its obvious advantages.

5. Claims 6- 8, 16, 14,15,19, 20 are rejected under 35 U.S.C. 102(e) as being anticipated by either Birukawa et al documents.

With respect to claims 6-8, 14 and 15, as noted in these documents, a MO record medium provides for both information and servo marks. Hence, during formatting of the disc, either by soft or hard formatting techniques, there is a magnetic reproducing head that appropriately detects the information as claimed. Furthermore, during the information writing segment/mode/operation of the system, a MO head - comprising of an optical and magnetic component - is appropriately used and information is applied to the record medium. Applicants' attention is drawn to the summary of the invention as found in either of the documents above.

Additionally, there is inherently positioning means/elements/ ability contained in these documents in order for the appropriate recording/reproduction of the information.

Furthermore, concerning the limitations of claims 14, 15, 19 and 20, by definition, the MO technique inherently meets these limitations. It is noted that claim 15 does not add any structural limitations to the apparatus.

The method claims parallel in the above apparatus claims are met with the system is in operation and no further analysis as made.

6. Claims 10, 11, 13, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claims 1 and 16 above, and further in view of the article to Saga et al

. The limitations concerning these dependent claims, GMR or MR head, SIL head, as well as the placing of the heads in opposition is taught by the article to Saga et al has being standard in this environment.

It would have been obvious to modify the base system with the additional teaching from the secondary reference to Saga et al and use an equivalent M0 head arrangement. Although no specific details of the MO head is readily apparent in the primary reference; nevertheless, the examiner considers such details/limitations has been known to those in the art has taught by the article to Saga et al.

7. Claims 9, 12 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 6 and 16 above, and further in view of Saga et al & Diepers et al and all further considered with Official notice.

Concerning the ability of having all the heads in a slider all arranged on the same side, such an arrangement is considered to be obvious in view of the Saga et al document considered with the Diepers et al document.

The Saga et al document depicts an M0 head arrangement are in a separate slider is used for the detection of servo marks. The ability of having a slider with two magnetic heads contained thereon is taught by the Diepers et al system.

Additionally, the ability of having both the optical and magnetic recording head on the same side in the M0 environment is considered to be well-known and Official Notice is taken thereof.

It would have been obvious to one of ordinary skill in the art to modify the base system with the additional secondary teachings from the document cited above in order to have a slider with all three transducing devices on the same side has required by these claims. Motivation would be to reduce the overall size and separate head supporting structure and reduction of size is a normal engineering goal.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Belser is cited for its description of hard and soft formatting of servo information. Cheung is cited for its description of a separate servo head in this environment for reading of the servo information. Baker et al is cited for it's teaching of the GMR heads in this environment. Tobita et al and Ando et al are cited for various M0 and servo disc segments known in this environment. Suzuki et al – see fig. 12 for its MO environment and head arrangement.

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M Psitos whose telephone number is (703) 308-1598. The examiner can normally be reached on M-Thursday 8 - 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, W. Korzuch can be reached on (703) 305-6137. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Aristotelis M Psitos
Primary Examiner
Art Unit 2651

AMP
April 25, 2002